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Data Sheet

Cisco Meeting Server, Meeting App, and Meeting Management Revolutionize Team Collaboration Through High Scale and Advanced Interoperability in Audio, Web, and Video Conferencing

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Product Overview

Cisco[®] Meeting Server brings video, audio, and web communication together to meet the collaboration needs of the modern workplace. The Cisco Meeting App allows anyone to create, join, and run meetings easily, from room or desktop video systems, mobile clients, or browsers. Cisco Meeting Management allows operators to monitor and control meetings, providing a white-glove service.

Cisco Meeting Server helps ensure that everyone gets a consistent, familiar meeting experience, whether they're joining a meeting using Cisco or third-party video endpoints, a Cisco Jabber® client, Cisco Meeting App (native or via a WebRTC-compatible browser), or Skype for Business. Any number of people can join a meeting, up to the maximum limit supported by the cluster, and bandwidth usage is optimized to reduce cost. Cisco Meeting Server provides a user experience that is simple, intuitive, and easy. It scales easily for small or large deployments, allowing capacity to be added incrementally as needed. The all-in-one, user-based licensing model allows you to buy the services you need today and add more licenses as your organization grows. Combined, Cisco Meeting Server and its licensing model provide you with flexibility to meet the changing needs of your organization.

Cisco Meeting App runs on multiple platforms—Mac, PC, iOS, and WebRTC-compatible browsers—allowing a wide range of end users access to its capabilities. The app is the user's portal to create one or multiple spaces, which they can then modify (for example, change the space's name, manage members, add PINs, etc.). Joining a meeting space is as simple as clicking one button, which then provides a simple, intuitive interface to manage the meeting (see who is in the meeting, add, drop, or mute participants, etc.).

Cisco Meeting Management is a tool for operators to monitor and manage meetings on Cisco Meeting Server. Administrators can easily monitor all active meetings with controls, such as add, drop, or mute participants; change layouts; start or stop recording or streaming; and more.

Cisco Meeting Server, Cisco Meeting App, and Cisco Meeting Management have been optimized to be deployed with Cisco Unified Communications Manager, Cisco Expressway[™], or Cisco TelePresence[®] Video Communication Server (VCS) for call control; Cisco Expressway for firewall traversal; and Cisco TelePresence Management Suite for scheduling. Third-party on-premises infrastructure is also supported.

Prominent Features

Advanced Interoperability

Anyone can join a meeting and enjoy a high-quality, consistent, and familiar experience using:

- Cisco or third-party video endpoints
- Cisco Jabber client
- Cisco Meeting App (native or with a WebRTC-compatible browser)
- Skype for Business on premises or Office 365

High Scalability and Geographic Distribution

Meetings scale easily, with:

- Low-cost virtualized Cisco UCS[®] servers for entry-level deployments. Cisco Meeting Server 1000 supports up to 96 HD ports whereas specification-based servers support up to 2.5 HD ports per physical core. Further details can be found <u>here</u>. For large-scale deployments Cisco UCS servers running as appliances can be used. Cisco Meeting Server 2000 is the industry's highest-capacity single server and supports up to 700 HD ports
- Multiple Call Bridges, which can be deployed as a cluster to offer scale, resiliency, and multiple geographical points of presence
- Clustering Call Bridges enables:
 - Meetings that can span multiple Call Bridge instances for capacity needs, scaling needs, or geographic distribution
 - Intelligent distribution linking. When meetings span multiple Call Bridge instances, intelligent distribution links
 are automatically maintained between Call Bridge instances to create a seamless, single meeting experience for
 all participants
 - Seamless scalability between hardware platforms, enabling customers to deploy different server types and sizes where they are needed
 - Bandwidth optimization for meetings between offices in different locations
 - Intelligent load balancing of call demand across available Call Bridges for load distribution
 - Optimized placement of calls across Call Bridges to reduce internal distribution links
 - Call bridge grouping to split large clusters into localities to optimize load balancing and resource allocation based on proximity
 - Horizontal scaling of services for increased capacity
- Clustering up to 24 Call Bridge instances within a cluster
 - A single cluster can support up to 16,800 HD concurrent calls
 - Clusters support up to 40 calls per second. (This is inclusive of participants calling in as well as internal calls required to load balance, move participants, etc.)
 - A meeting on a single Call Bridge supports up to 450 participants or up to 2,600 participants across multiple Call Bridges in a single cluster
 - A review by Cisco engineering is required in designs that require greater than eight Servers
- Conference recording and streaming when you need to archive or to extend beyond the Cisco Meeting Server deployment
- Ability to synchronize up to 75,000 Lightweight Directory Access Protocol (LDAP) users across a 24-node cluster, with each user having their own meeting space
- Up to 500 concurrent XMPP sessions. An XMPP session is used for any guest or authenticated Cisco Meeting App user (Mac, PC, iOS, WebRTC) in a call. An XMPP session is also used for every recording and streaming session
- Up to 100 WebRTC connections per WebBridge service
- Capable Cisco endpoints can display video across one, two, or three screens

Intuitive User Experience

End users can concentrate on collaborating without worrying about how the technology works. These Meetings products provide a range of options optimized for multiple collaboration scenarios:

- Capable Cisco endpoints can display video across one, two, or three screens
- APIs can be used to configure which participants are seen on the screen
- A range of layouts is available to choose from that suit the majority of meetings. The ability to create and use unique custom layouts is also available via a separate license.
- Roster lists with end-user controls can be displayed on compatible Cisco endpoints, Jabber® clients, the Cisco Meeting App, and Cisco Meeting Management for operators

Meeting Management

Cisco Meeting Management displays active meeting information with controls for managing the Cisco Meeting Server deployment, without requiring the operator to understand the complexities of the underlying video bridge configuration and call setup. Supported functions include:

- The ability to list active and upcoming meetings for a 24-hour period across Cisco Meeting Server clusters, as well as the ability to sort, filter, and search
- The ability to list participants in an active meeting
 - See who is speaking in the conference
 - Sort, filter, and search participants
 - Mute and unmute audio for individuals, all, or groups of selected people or new participants
 - Mute and unmute video
 - Make participants important
 - Change the layout (meeting wide or individually)
 - Add or drop participants
 - View call statistics (audio, video, or presentation)
 - Start a recording or streaming session of the meeting
 - Move participants between meetings
- Display a dashboard for license usage
- A meeting events log, which is retained for seven days

Simple, Predictable, All-in-One Commercial Model

Get users up and running easily, with licensing that:

- Is available with Cisco Unified Workplace Licensing Meetings or can be purchased on a per-meeting basis
- Includes spaces (virtual meeting room environments), Cisco Meeting App, Cisco Meeting Management, scheduling, Microsoft Skype for Business interoperability, and firewall traversal in one license
- Enables customers to purchase the license entitlements they need today and scale up as needed

Features and Benefits

Table 1 lists the features and benefits of Cisco Meeting Server.

Table 1. Features and Benefits of Cisco Meeting Server

Feature	Benefit
Interoperability	Collaboration becomes easier and joining meetings is simpler because users can choose the device and application they connect with. Whether they choose Cisco or third-party room or desktop endpoints, a Cisco Jabber client, Cisco Meeting App (native or via a WebRTC-compatible browser), or Skype for Business/Office 365, on a laptop, tablet, or mobile phone, they can collaborate from anywhere, on any device, at any time.
Geographic distribution with bandwidth optimization	You can preserve the user experience in larger video conferences while reducing bandwidth costs.
High scalability	Multiparty licensing does not restrict meeting size; spaces on a single server support up to 450 participants, and spaces can be distributed across multiple servers where greater scale is required. Table 3 (call capacity) shows what can be achieved on individual servers. However, individual servers can be configured to allow more participants to join meetings by incrementally changing the quality experienced by existing participants. Alternatively, in larger deployments, conferences can be load-balanced to maximize effective capacity.
One solution	By supporting all major video standards in one solution and optimizing the experience, regardless of the underlying technology or device, Cisco Meeting Server provides a consistent user experience for audio, video, and content sharing while reducing the complexity and cost of the deployment.
Everyone's invited	Collaborate with other businesses and customers by inviting them to meet, just by sending them a link.
Security	Collaboration is highly secure, as Cisco Meeting Server uses "clean-slate" technology and a secure development lifecycle. With Federal Information Processing Standards (FIPS), Joint Interoperability Test Command (JITC), and Common Criteria certifications, Cisco Meeting Server adheres to the most stringent security models.
End-user control	End-user adoption increases because they can create their own spaces as well as manage their meetings with ActiveControl. Some examples of what they can do include viewing participant lists, muting, making important and removing participants, starting and stopping a recording, and more. The Cisco Meeting App supports both space creation as well as meeting management, Cisco Collaboration endpoints, and Cisco Jabber support meeting management .
Simple, all-in-one, user-based licensing model	Licensing models reduce purchasing complexity and enable IT managers to easily enable user services.

* Meeting management with ActiveControl is supported from CE version 8.3 and higher or Jabber version 12.5 and higher. Refer to the individual notes for which meetings controls are supported in each release.

Table 2 lists the features and benefits of Cisco Meeting Management.

Table 2.	Features and Benefits of Cisco Meeting Management
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Product feature	Benefits
Security and auditing	 All control data is authenticated and encrypted (industry-standard Transport Layer Security [TLS]) IPv6 support Network Time Protocol (NTP) authentication key support Support for integrated application audit logging to monitor system changes
Account management and permissions	 Supports role-based permissions by integrating with Microsoft Active Directory (AD) or Open Lightweight Directory Access Protocol (OpenLDAP) Synchronization with the enterprise directory provides for automatic user account creation and maintenance Up to 25 concurrent administrators and logged-in users
Diagnostics and troubleshooting	 Syslog - local and remote Crash logs Log bundle System log Audit log System configuration Application configuration System information Configuration backup and restore
High availability	 Cisco Meeting Management supports an active-active high-availability model. Each Cisco Meeting Management node builds its own view of the ongoing meetings on the Meeting Server clusters. As such, no information is shared between Meeting Management nodes.

Platform Support

Cisco Meeting Server software is optimized to run on **Cisco Meeting Server** 1000 and 2000 appliances. In terms of scale, Table 3 shows the capacity a call bridge on **Cisco Meeting Server** can support on each server. Table 3 assumes call rates up to 2.5 Mbps—720p5 content for video calls and G.711 for audio calls. Other codecs and higher content resolution/framerate will reduce capacity. When meetings span multiple call bridges, distribution links are automatically created and also count against a server's call count and capacity.

One of the key benefits of Cisco Meeting Server is its ability to scale flexibly. Although Table 3 shows what can be achieved in certain scenarios, individual servers can be configured to allow more participants to join meetings by incrementally changing the quality experienced by existing participants. Alternatively, in larger deployments, conferences can be load-balanced to maximize effective capacity.

Type of call	Cisco Meeting Server 1000 M4	Cisco Meeting Server 1000 M5*	Cisco Meeting Server 2000**
Full HD calls (1080p60)	24	24	175
Full HD calls (1080p30)	48	48	350

Table 3.Call Capacity on Supported Servers

Type of call	Cisco Meeting Server 1000 M4	Cisco Meeting Server 1000 M5*	Cisco Meeting Server 2000**
HD calls (720p30)	96	96	700
SD calls (448p30)	192	192	1000
Audio calls	1700	2200	3000

* Cisco Meeting Server 1000 is a preconfigured version of the Cisco UCS C220 M5 Rack Server. Full specifications can be found at: <u>https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/datasheet-c78-739281.html</u>. For Cisco Meeting Server 1000, Cisco Meeting Server runs on top of VMware, and a separate VMware license is required.

** Cisco Meeting Server 2000 is a preconfigured Cisco UCS 5108 Blade Server Chassis with eight Cisco UCS B200 M5 Blade Servers. Full specifications can be found at: <u>https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-5100-series-blade-server-chassis/data_sheet_c78-526830.html and https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/datasheet-c78-739296.html. For Cisco Meeting Server 2000, Cisco Meeting Server runs directly on the server and does not require VMware.</u>

Cisco Meeting Server requirements for specifications-based servers can be found at:

https://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/virtualization-cisco-meeting-server.html.

Cisco Meeting Management runs on top of VMware. It has different platform requirements, depending on whether it is for a small- or medium-scale or a large-scale deployment.

Small- or medium-scale deployments (up to eight nodes of Meeting Server 1000 or one node of Meeting Server 2000; up to four nodes of X-Series servers) need 4 vCPUs at 2.0 GHz or above, 4 GB RAM, and 100 GB storage (thick-provisioned, eager-zeroed) that provide:

- 10,000 meetings per week
- 10 call legs per second (peak usage)
- 15 concurrent users (operators)

Large deployments (up to 24 nodes of Meeting Server 1000 or up to four nodes of Meeting Server 2000; up to 10 X-Series servers) need 8 vCPUs at 2.0 GHz or above, 8 GB RAM, and 100 GB storage (thick-provisioned, eager-zeroed) that provide:

- 10,000 meetings per week
- 20 call legs per second (peak usage)
- 25 concurrent users

Product Specifications

Table 4 lists the specifications for Cisco Meeting Server.

Table 4.Specifications

Video standards	 H.261 H.263 (+, ++) H.264 AVC (baseline and high profile) H.264 SVC WebM, VP8 Microsoft RTV HTML5/WebRTC SIP, H.323, TIP BFCP RDP Far End Camera Control (FECC) passthrough
Audio standards	 AAC-LD Speex Opus G.722, G.722.1, G.722.1c, G.728, G.729a, G.711a/u
Bandwidth	• Up to 6000 kbps
Resolution and frame rate	 Up to 1080p at 60 fps for main video and up to 1080p30 for content Recordings can be configured between voice, 720p30, or 1080p30 Up to 720p30 for streaming
Management	 Server management LDAP-driven scripting language for configuration Representational State Transfer (REST) API for assets, monitoring, and diagnostics Call Detail Record (CDR) streaming for auditing Syslog for diagnostics Multitenancy support Simple Network Management Protocol (SNMP) Backup and restore
Security	 IP media (video and audio) is Advanced Encryption Standard (AES) encrypted (industry-standard Secure Real-Time Transport Protocol [SRTP]) All control data is authenticated and encrypted (industry-standard TLS and Secure Sockets Layer [SSL]) Domain Name System Security Extensions (DNSSEC) IPv6 support Security code or PIN option for spaces On-screen visual indication of audio-only participants and encryption status Field industry-standard strong cryptography protection of communications JITC certified FIPS-140-2

Cisco Meeting Management client requirements	The browser needs to support and have enabled the following technologies: WebSocket HTML5 Javascript Cisco Meeting Management has been tested with the latest version of the following browsers: Mozilla Firefox Microsoft IE 11 Google Chrome Safari
Cisco Meeting App device compatibility	Windows, OS X, iOS, and WebRTC browsers (Chrome, Firefox, and Safari). Refer to the release notes for the Cisco Meeting App for supported operating systems, browser versions, and platforms.

Ordering Information

Following are the four main steps for ordering Cisco Meeting Server. Refer to the ordering guide at <u>https://www.cisco.com/c/en/us/products/conferencing/meeting-server/sales-resources-listing.html</u> for more information.

- 1. Customers should select their chosen platform. Cisco Meeting Server software has been optimized to run on the Cisco Meeting Server 1000 and 2000 appliances. Third-party servers are also supported.
- Flexible-capacity licensing options enable customers to deploy Cisco Meeting Server capabilities in the way that best suits their needs. Cisco Meeting Server is licensed on a per-meeting basis with Cisco Multiparty licenses. These licenses are available in the form of Personal Multiparty (named host) and Shared Multiparty (shared host) licenses. Visit <u>https://cisco.com/go/meetingserver</u> for more information.
 - a. Customers have choice of a subscription, with monthly or yearly billing, with Cisco Software Support Services (SWSS) bundled together, or perpetual licensing with mandatory Software Support Services (SWSS) purchased separately.
 - b. Alternatively, you can purchase perpetual capacity units for a concurrent call-based model (traditional license model).
- 3. Optional recording and streaming can be added. If you need to manage, transform, or distribute recordings or streams across the organization, solutions such as Rev and DME are available from our solutions partner, VBrick. More details are in the <u>Cisco Meeting Server ordering guide</u>.
- 4. Cisco Multiparty licensing includes entitlement for hosting meetings, connecting with Cisco Jabber for Cisco Meeting Server and the Cisco Meeting App, and Cisco Meeting Management. Software for these products can be downloaded from <u>https://www.cisco.com/go/software</u> with an active Cisco Support Contract. Cisco Meeting App for iOS devices can be downloaded from the Apple App Store.

Table 5 provides ordering information for Cisco Meeting Server.

Table 5.	Ordering Information
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Platform (step 1)	Description
CTI-CMS1KM5-BUN-K9	Cisco Meeting Server 1000 M5 Bundle
CTI-CMS2KM5-BUN-K9	Cisco Meeting Server 2000 M5 Bundle
R-CMS-K9	Virtual Edition Cisco Meeting Server Activation key for a third-party server

License (step 2)	Description
Subscription	Choose Subscription or Perpetual
A-CMS (top level SKU)	Cisco the Meeting Server Subscription plan for Meetings with yearly, monthly or pre- payment and one- to five-year duration. The subscription includes Software Support Services.
A-CMS-EA-EC	Enterprise Agreement per host for all knowledge workers within the enterprise; unlimited Meetings includes recording, streaming, TMS for scheduling services, and Cisco Expressway [™] Rich Media Services
A-CMS-PMP	Personal Multiparty Meetings per host; includes TMS for scheduling services and Expressway Rich Media Services
A-CMS-SMP	Shared Multiparty (concurrent Meeting) includes Expressway Rich Media Services
Perpetual	One-time purchased license with Software Support Services (SWSS) is a mandatory add-on offer in 1-, 2-, 3-, and 5-year terms
CUWL-12X-K9 or CUWL-11X-K9	Cisco Unified Workspace License (UWL) Meetings
Next, select NEW-UWL-12X-MTG or NEW-UWL-11X-MTG	Includes the full Cisco Unified Communications feature stack plus Meetings, Cisco Jabber, TMS for scheduling services, and Expressway Rich Media Services
CMS-PMP-K9	Personal Multiparty (per host) Meetings is a perpetual license a la carte (without Cisco UWL)
ТР-ЅМР-К9	Shared Multiparty License (one concurrent meeting) – perpetual. Includes Expressway Rich Media Services
LIC-CMS-ACU=	Cisco Meeting Server Capacity Unit (legacy per port)

Options (step 3)	Description
Subscription options	
A-CMS-CUSTOM	Add the ability to create and use custom layouts
A-CMS-RECORDING	Add recording or streaming on a per-port subscription basis
A-CMS-JABBER*	Optionally add Jabber for Cisco Meeting Server with a Meetings subscription

Options (step 3)	Description			
A-CMS-JABBER-ADDON*	Optionally add Jabber for Cisco Meeting Server for existing Cisco Meeting Server customers with a current support contract			
Perpetual options				
CMS-RECORDING (top SKU) CMS-REC-STARTERKIT LIC-CMS-REC-PORT	Cisco Meeting Server recording and streaming Cisco Meeting Server recording starter kit Cisco Meeting Server recording or streaming additional port			

Third-party platforms are also supported, in which case the Cisco Meeting Server software must be ordered separately (R-CMS-K9).

* Cisco Jabber for Cisco Meeting Server is included with a Meeting Server License, allowing for calling into meetings. Cisco Unified Communications Manager 12.5 minimum is required, point-to-point, ad-hoc escalation or IM&P services require a Cisco Unified Communications Manager (UCM) Calling subscription or Cisco Unified Workplace or Unified Calling license.

Table 6 shows the number of participants who are entitled to join a meeting by license type.

Type of call	Participants per shared Multiparty license	Participants per Personal Multiparty license	Participants per Cisco Meeting Server capacity unit
Full HD calls (1080p60)	Unrestricted	Unrestricted	0.25
Full HD calls (1080p30)	Unrestricted	Unrestricted	0.5
HD calls (720p30)	Unrestricted	Unrestricted	1
SD calls (448p30)	Unrestricted	Unrestricted	2
Audio calls	6 audio-only meetings per SMP; unrestricted participants per meeting (no content is allowed)	Unrestricted	12
Microsoft gateway calls	6 gateway calls per SMP+ license	1	Dependent on resolution (same as a standard call)

Table 6.Meeting Capacity by License Type

Note that although the licensing does not restrict the number of participants, there may be hardware or software limitations that restrict the number of participants per meeting or per server.

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